

QUIZ #3#

COURSE NAME: MOBILE COMMUNICATION – (EE 463)

DATE: SMESTER 1, 2016-2017

TIME: ½ HOURS

IDEAL SOLUTION

Student's name:	Pin:	Student's signature	Total marks (8)

Important Notes:

- 1- TIME ALLOWED (30 minutes)
- 2- THIS EXAMINATION PAPER HAS (3 PAGES), INCLUDING THE COVER PAGE.
- 3- TOTAL MARKS AVAILABLE (8)
- 4- MARKS AVAILABLE FOR EACH QUESTION ARE SHOWN IN THE EXAMINATION PAPER. ALL QUESTION ARE NOT OF EQUAL VALUE
- 5- ALL ANSWERS MUST BE WRITTEN IN INK. EXCEPT WHERE THEY ARE REQUIRED. PENCILS MAY BE USED ONLY FOR DRAWING, SKETCHING OR GRAPHICAL WORK.
- 6- THIS PAPER MAY NOT BE RETAINED BY THE CANDIDATE.
- 7- CLEARLY SHOW ALL STEPS AND FINAL ANSWER MUST MAKE SENSE.
- 8- READ EACH WORD CAREFULLY.

SPECIAL INSTRUCTIONS :

- 1- CANDIDATES MAY BRING TO THE EXAMINATION: CALCULATORS AND ALL NOTES THEY DEEM NECESSARY.
- 2- ANSWER ALL QUESTIONS.
- 3- YOU CAN USE THE REVERSE SIDE OF PAPERS ALSO.
- 4- ASSUME ANY MISSING VALUES.

Question	Multiple choice questions 2	Exercise 6
Marks		

Question:-

1. In Mobile telecommunication systems, a number of databases are used to store information about mobile users. One of these databases contains data records about mobile stations that can be used to check for stolen mobile stations. This type of database is known as

_____.

- a. home location register
- b. visitor location register
- c. equipment identity register
- d. signaling level register

Ans: c

2. Fading of the received radio signals in a mobile communication environment occurs because of

- a. Direct propagation
- b. Multipath Propagation
- c. Bi-path Propagation
- d. None of the above

Ans: b

3. Which of the following statement is true about spread spectrum:

- a. It uses a narrow band frequency
- b. Spread Spectrum allocates disjoint resources (frequency or time slots depending on the access system) to each user.
- c. Spread Spectrum signals can be picked up by simple receivers
- d. Spread spectrum signals are hard to jam and identify

Ans: d

4. On the surface, queuing of handover requests seems to be a bad scheme and not possible since handover must not be noticed(delay sensitive) by the user. But it turns out that queuing handover request is possible. Why is handover request queuing possible?

- a. Handover request taking up to 800ms would not be noticed by the user. Queuing is possible within this time.
- b. There exist a time interval between the mobile phone reaching the handover threshold and the receiver threshold.
- c. Handover request can be made small packets. Therefore the queue can be processed very quickly.

- d. The alternative to queuing handover request is queuing new originating calls which is far more delay sensitive. Therefore queuing handover request(although delay sensitive) is a better idea.

Ans: b

Exercise:

Exercise 2

Check the right box

	Functions	BTS	BSC
1	Management of radio channels		
2	Management of terrestrial channels		
3	Mapping of terrestrial onto radio channels		
4	Channel coding and decoding		
5	Rate adaptation		
6	Encryption and decryption		
7	Paging		
8	Uplink signal measurements		
9	Traffic measurement		
10	Authentication		
11	Location registry, location update		
12	Handover management		

Solution

	Functions	BTS	BSC
1	Management of radio channels		X
2	Management of terrestrial channels		X
3	Mapping of terrestrial onto radio channels		X
4	Channel coding and decoding	X	
5	Rate adaptation	X	
6	Encryption and decryption	X	X
7	Paging	X	X
8	Uplink signal measurements	X	
9	Traffic measurement		X
10	Authentication		X
11	Location registry, location update		X
12	Handover management		X